

## The War

### Canadian Red Cross Food Parcels for British Prisoners-of-war in Germany

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The Canadian Red Cross has taken the responsibility of supplying 10,000 food parcels each week for the British prisoners-of-war in Germany. The food is being supplied by Canadian firms at practically the exact cost to the manufacturer, with no allowance for overhead or administrative expenses. The sum involved in supplying these food parcels during the course of one year will approximate one and one-half million dollars. As this money has been subscribed by the people of Canada, it is felt that the physicians of Canada and others would be interested in the scientific analysis of the food being sent.

According to Postal Regulations the gross weight of each weekly parcel dispatched to individual prisoners in Germany must not exceed a total of 11 pounds. The articles chosen and the amounts of each are given in Table I. The

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weight of the whole parcel, including the various containers, is 11 pounds. Each article and the reason for its inclusion will now be considered in detail.

The 1 pound of powdered whole milk when reconstructed with water will supply 18.3 ounces of whole fluid milk per day. This is an excellent source of calories, protein and fat, and in addition, as shown in Table I, is a valuable source of vitamin A, vitamin B<sub>1</sub>, or thiamin, vitamin B<sub>2</sub>, or riboflavin, and a number of the other members of the vitamin B complex. The powdered whole milk supplies an amount of vitamin C which varies somewhat with the season of the year at which the milk is powdered. It probably contributes 10 mg. or more of vitamin C to the daily ration. Six hundred milligrams of calcium is furnished by the day's supply of reconstructed whole milk.

The amount of butter being sent, namely, 1 pound per week, might at first glance be considered rather large, but it should be remembered that from all reports fats are scarce in Germany. In addition to supplying fat, and consequently a large number of calories for the weight, the butter supplies no less than 1,500 international units of vitamin A. To ensure its keeping the butter is sealed in tins.

The cheese sent is a cheese processed from Canadian cheddar cheese in such manner that

TABLE I.

FOOD ANALYSIS OF CANADIAN RED CROSS FOOD PARCELS FOR PRISONERS-OF-WAR IN GERMANY

	Weekly amount	Daily amount	Calories	Protein	Fat	Carbo- hydrate	Vita- min A	Vita- min B <sub>1</sub>	Vita- min B <sub>2</sub>	Vita- min C	Vita- min D
	oz.	oz.		grams	grams	grams	units	units	micro- grams	grams	units
1. Whole milk powder..	16	2.3	380	20	20	27	568	78	975	?	10
2. Butter.....	16	2.3	486	0	54	0	1560	0	0	0	52
3. Cheese.....	4	0.57	61	4	5	0	325	2	121	0	0
4. Corned beef.....	12	1.7	106	13	6	0	0	0	108	0	0
5. Pork luncheon meat.	10	1.4	131	8	11	0	0	144	81	0	0
6. Salmon.....	8	1.14	111	10	8	0	32	0	0	0	119
7. Sardines or kippers..	4	0.57					22	0	64	0	90
8. Dried apples.....	8	1.14	96	0	0	24	50	15	30	0	0
9. Dried prunes.....	8	1.14					808	15	0	0	0
10. Sugar.....	8	1.14	128	0	0	32	0	0	0	0	0
11. Jam.....	16	2.3	160	0	0	40	0	0	0	0	0
12. Pilot biscuits.....	16	2.3	291	7	7	50	0	0	0	0	0
13. Eating chocolate....	8	1.14	120	1	5	18	0	0	0	0	0
14. Salt and pepper.....	1	0.14	..	..	..	..	..	..	..	..	..
15. Tea.....	4	0.57	..	..	..	..	..	..	..	..	..
16. Soap.....	2	0.28	..	..	..	..	..	..	..	..	..
			2070	63	116	191	3365	254	1379	?	271
Not included in the Food Parcel from Canada (See text)											
Flour.....	10		1000	30	0	210	0	250	297	0	0
Potato.....	8		196	4	0	45	68	88	102	?	0
Total.....			3266	97	116	446	3433	592	1778	?	271

Calories required for men doing light manual work—2,800 per day.

Calories required for men doing moderate manual work—3,300 per day.

Protein requirements—70-100 grams per day.

Fat requirements—100 grams per day.

Carbohydrates supplied go to make up the total caloric intake.

it will keep without going mouldy or deteriorating during transit. Along with the other dairy products, milk and butter, the cheese contributes to the protein, fat, vitamin A, vitamin B<sub>2</sub> and calcium content of the diet.

Corned beef was chosen as a source of meat because in the past it has been found to be one of the most acceptable forms of canned meat for day in and day out use. Its chief value is to supply protein. Pork luncheon meat is included particularly on account of its very high vitamin B<sub>1</sub> content. It consists of 90 per cent lean pork and 10 per cent pork fat. Experience shows that the men prefer a solid meat rather than stews, which they are probably already receiving from German sources.

Salmon, pilchard, and herring in the form of canned herring, kippers and sardines are the best sources of vitamin D amongst our Canadian fish. They furnish valuable amounts of protein and fat, and will make a welcome change from canned meat.

Dried apples and dried prunes when soaked in water make acceptable material for a dessert. Being dehydrated they furnish an appreciable number of calories for their weight.

Sugar and jam are included as a source of calories and along with the eating chocolate supply sweets. The pilot biscuit, or hard biscuit, is made largely of white flour and water. It can be eaten as a biscuit with butter or broken into crumbs to thicken soup.

Salt, pepper, tea and soap are included for obvious reasons.

It is seen from Table I that these foods will supply 2,070 calories, 63 grams of protein, 116 grams of fat and 191 grams of carbohydrate. It is difficult to determine just what food the prisoners-of-war will receive from German sources during the coming months, but according to the International Convention relative to the treatment of prisoners-of-war, "The food

ration for prisoners-of-war shall be equivalent in quantity and quality to that of the depot troops." This means that the British prisoners-of-war should receive from German sources the same quantity and quality of food as is given to the German garrison troops. Even if the ration of the German garrison troops, and consequently the prisoners-of-war, were cut down to cereals and vegetables, such as 10 ounces of flour and 8 ounces of potatoes per day, this along with the food parcels from Canada would supply 3,266 calories per day, 97 grams of protein, 116 grams of fat, and 446 grams of carbohydrate.

In Table II is set out the daily adequate amounts of vitamins A, B<sub>1</sub>, B<sub>2</sub>, C and D required in International Units and milligrams, and also the amounts supplied by the food sent from Canada and the amounts furnished by 10 ounces of whole grain flour and 8 ounces of potatoes. In order to overcome any possible deficiency 7 vitamin tablets are included in each weekly parcel, each tablet supplying 2,000 units of vitamin A, 30 mg. of vitamin C, and 200 units of vitamin D.

TABLE III.  
MINERAL REQUIREMENTS AND AMOUNTS  
SUPPLIED BY FOOD

	<i>Adequate requirements</i>	<i>Supplied by Food</i>		<i>Total</i>
		<i>Canada</i>	<i>10 oz. whole wheat or rye flour 8 oz. potatoes</i>	
Calcium...	<i>mg.</i> 600	<i>mg.</i> 748	<i>mg.</i> 100	<i>mg.</i> 848
Iron.....	10	4.7	6.6	11.3
Iodine....	Supplied	by iodized salt and fish.		

In Table III are given the requirements for calcium and iron and the amounts supplied by the food. In the near future it may be possible to add some form of iron to the biscuits to increase the iron content of the food from Canada.

It is proposed to alter the type of foods sent from time to time to relieve any monotony that may develop, but the general scientific principles as outlined here will be followed.

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### A Three-way Heart Test Urged for Military Pilots

Civilian and military pilots and the young men about to train for defense service in America's expanding air forces should have the benefit of a new and highly efficient triple test for unsuspected heart disease, members of the

TABLE II.

VITAMIN REQUIREMENTS AND AMOUNTS SUPPLIED BY  
FOOD AND VITAMIN TABLETS

	<i>Adequate amount required</i>	<i>Supplied by food</i>		<i>Supplied by vitamin tablet</i>	<i>Total</i>
		<i>Canada</i>	<i>10 oz. whole wheat or rye flour -8 oz. potatoes</i>		
Vitamin A	3,000-6,000 units	3,365 units	68	2,000 units	5,433 units
Vitamin B <sub>1</sub>	300-500 units	254 units	338 units	..	592 units
Vitamin B <sub>2</sub>	1.5 to 2 mg.	1.3 mg.	0.4 mg.	..	1.7 mg.
Vitamin C	40-60 mg.	10 mg.	?	30 mg.	40 mg.
Vitamin D	400 units	271 units	0	200 units	471 units